

**What is Claimed is:**

1. 1. A high strength detachable cylinder-to-plate joint comprising:  
2 a connecting disk detachably attached to a base plate;  
3 a cylinder having an annular end with an abutment surface; and  
4 a threaded connection for detachably attaching the annular end  
5 to the connecting disk so that the abutment surface abuts the  
6 base plate.
- 1 2. The joint of claim 1, wherein the base plate comprises a table  
2 top and the cylinder comprises a table leg.
- 1 3. The joint of claim 1, wherein the cylinder has first and second  
2 annular ends each threadably connected to corresponding  
3 connecting disks for forming a detachable joint between first  
4 and second plates.
- 1 4. The joint of claim 3, wherein the cylinder first and second  
2 annular ends are threaded in reverse direction to each other  
3 and mate with reverse threaded plates such that connection  
4 between the two plates can be made tight by turning the  
5 cylinder in only one direction of rotation.
- 1 5. The joint of claim 1, wherein the annular end comprises a  
2 sleeve having first and second ends wherein the first end  
3 threadably receives the connecting disk and the second end  
4 receives the cylinder.
- 1 6. The joint of claims 5, wherein the second end is threadably  
2 attached to the cylinder.
- 1 7. The joint of claim 5, wherein the second end of the sleeve has  
2 tapered walls mated to a corresponding tapered diameter end  
3 of the cylinder.

- 1    8. / The joint of claim 7, wherein the sleeve includes one or more  
2       attachment bolts screwed into the tapered diameter end of the  
3       cylinder.
- 1    9. / The joint of claim 8, wherein the sleeve includes an integrally  
2       formed disk for receiving the attaching bolts.
- 1    10. The joint of claim 8, wherein the sleeve includes a second  
2       threadably connected disk for receiving the attaching bolts.
- 1    11. The joint of claim 1, wherein the plate is bolted between the  
2       connecting disk and a second disk having a threaded outer  
3       diameter.
- 1    12. The joint of claim 11, wherein the second disk is detachably  
2       attached to an annular end of a second cylinder to form a  
3       combination joint.
- 1    13. The joint of claim 1, wherein the connecting disk is attached by  
2       spring loaded bolts.
- 1    14. The joint of claim 1, including a gasket between the base plate  
2       and the cylinder abutment surface.
- 1    15. / The joint of claim 5, wherein the sleeve has a variable diameter.
- 1    16. The joint of claim 1, including pins for limiting rotation of the  
2       connecting disk.
- 1    17. A shelving system comprising successive shelves stacked  
2       using multiple joints in accordance with claim 12.
- 1    18. Furniture comprising multiple joints in accordance with claim 3.
- 1    19. The joint of claim 5, wherein the sleeve comprises a square  
2       stock having a cylindrical hole.

- 1    20. / The joint of claim 5, wherein the sleeve is enclosed by a veneer  
2        sheath comprising a material matching or complimenting the  
3        composition of the extension device in the sleeve or plate.